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Discussion and Clarifications from HQ

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Goal 1: Are the current Decision Documents (DD), 1989 ROD, 1994 ESD, 2000 ESD conclusive and effective?

Basis: The current RA of pump & treat (P&T) has been ongoing for long. The RP intends to pursue aggressive Pilot Test with insitu bioremediation. If the Pilot Test is successful in achieving the parameters described in 2000 ESD, the RP's contention is to maintain the P&T rather than turn in on.

Discussion:

1. **Would the RP's contention meet the DD?**
2. **Would there be a need for DD amendment (ROD or ESD)?**
3. **Would the criteria be met for NPL deletion?**
4. **Would NPL deletion allow for site closure?**

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The site was placed on NPL in 1984.

IDNR prepared the ROD on September 14, 1989.

Soils Cleanup remedy (S-3): Excavation, Onsite Bioremediation, and Onsite Disposal on treated soils

Cleanup Objective for solid waste/soils is to reduce migration of contaminants into groundwater by removal and/or treatment of the source, i.e., the contaminated soils/solid waste.

Groundwater Cleanup remedy (GW-1): Pumping, Air Stripping, and Discharge to Surface Water

Cleanup Objective for groundwater will be to reduce contaminants in groundwater to established health-based standards for drinking water.

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Section 2.6 Description of Alterantives, on page 14 provides the Groundwater Remedy Description as follows:

Contaminated groundwater would be removed by pumping from one or more wells. This well (or wells) would be located and sized to draw water from the entire area of groundwater contamination thereby preventing any off-site migration of groundwater contaminants. A pumping test would be conducted during the remedial ' design to determine aquifer characteristics. This information would be used to design the pumping system, i.e., number and location of wells, pumping rates, and gradient controls. The pumped water would be run through an air stripper to remove in excess of 95% of the volatile organic contaminants. Air stripping is a well-established process in which water is cascaded through a column packed with an inert media (e.g., plastic balls) and air is forced through the column in a counter direction. Volatile organics are stripped from the water and included in the air discharged from the top of the column. Carbon adsorption would be used to remove contaminants in the air discharged from an air stripper, if necessary to meet air quality standards. Treated water, meeting water quality standards, from the air stripper would be discharged to the nearby unnamed stream. If water from the air stripper does not meet water quality standards, additional treatment would be provided, as necessary. The need for additional treatment, however, is not anticipated. **Pumping and treatment would continue as long as necessary to reduce contaminant levels to established cleanup levels.**

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Under Section 2.8 Selected Groundwater Remedy on page 20 of ROD provides as follows:

Contaminated groundwater would be removed by pumping from one or more recovery wells. A pumping test will be conducted during the remedial design to determine aquifer characteristics. This information will be used to design the pumping system; i*e., number and location of wells, pumping rates, and gradient controls. The well (or wells) would be located and sized to draw water from the entire contaminant plume thereby preventing any off-site migration of groundwater contaminants. The pumped water would be treated by air stripping to remove greater than 95 percent of the volatile organic contaminants. Carbon adsorption would be used to remove contaminants in the air discharged from an air^ stripper, if necessary. Treated water from the air stripper would be discharged to the adjacent stream. Activated carbon used for air stripping off-gas and water polishing prior to discharge would be regenerated or disposed of in an approved landfill facility. **Pumping and treatment will be continued until groundwater ARARs are met. A groundwater monitoring program, approved by the DNR, will be implemented and criteria for ceasing remedial action based on monitoring results will be developed.**

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IDNR prepared the ESD on July 20, 1994. The Section "DESCRIPTION OF SIGNIFICANT DIFFERENCES AND BASIS FOR THOSE DIFFERENCES" on page 2 has the following:

Since the signing of the ROD in September of 1989, …,estimated in the ROD.

After implementation of the groundwater remedial system, free product (primarily xylenes) was found to be drawn to two recovery wells in addition to the previous well used for free product recovery. These two recovery wells have been retrofitted with free product recovery equipment. The original estimate of free product volume was 5,000 gallons. This estimate has been revised to at least 50,000 gallons. Free product recovery is now considered to be a more important factor in the ultimate site cleanup. Other actions to enhance free product recovery are being considered.

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IDNR prepared the ESD on October 30, 2000. The page 7 has the following:

……The existing groundwater monitoring plan will be revised to provide a groundwater monitoring strategy that will be used to verify that migration of contaminated groundwater from the site is not occurring. Revisions will include criteria to determine if, and when, discontinuation of active groundwater remediation (i.e., the ongoing pump and treat) is warranted. The criteria will include:

- no exceedance of chemical-specific ARARs at the property boundaries,
- no expansion of groundwater contamination as demonstrated by stable or decreasing groundwater contaminant levels throughout the site, and
- no other evidence that suggests the potential for migration of groundwater from the site at levels in excess of chemical-specific ARARs.

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IDNR prepared the ESD on October 30, 2000. The Section "DESCRIPTION OF SIGNIFICANT DIFFERENCES" on page 8 has the following selected items (not all are listed below):

1. Estimated 80,000+ gallons of free product remaining.

2. Excavation of free product area, moving soils containing free product to intermediate depth, installing lateral air piping within, and conducting soil vapor extraction/bioventing.

3. Groundwater pump and treat actions to continue until chemical-specific ARARs are met, until enhanced free-product removal is completed, and it can be demonstrated by monitoring that chemical-specific ARARs will always be met at **the site property boundary** without additional active remedial measures.

4. Placing an **environmental protection easement** on the site as an institutional control. The easement would prohibit use of on-site groundwater for drinking water (or other unsafe use) and would prohibit excavation in the area where soils containing high levels of metals were placed.

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Superfund Task Force Recommendation #2:

RECOMMENDATION 2: Develop Strategies for NPL Sites where Remedies have been Selected to Move Sites Towards NPL Deletion

Tools to achieve this goal include:

- *Requiring Remedy Completion Strategies to identify next steps and track progress.*
- *Conducting Optimization Reviews, including identification of fifteen sites at which to immediately pilot such review.*
- *Implementing early response actions at selected portions of sites.*
- *Finishing sites where construction is completed or nearly completed in order to transition the site from "Remedial Action" to "Ready for Reuse" to Deletion, as appropriate.*

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NPL Deletion Process: https://semspub.epa.gov/work/HQ/176076.pdf

As detailed in the above referenced guidance, site deletion requirements include:

- ✓ the documentation of activities and decision making at the site is complete,
- ✓ the activities conducted and documented are verified, and
- ✓ the public has an opportunity for notice and comment before the site is formally deleted from the NPL.

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